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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

Application Number: 08/849,525  
Filing Date: August 29, 1997  
Appellant(s): LANZENDORFER ET AL.

**JUN 14 2007  
GROUP 1600**

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Neil F. Greenblum  
Reg. No. 28,394  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed January 31, 2007 appealing from the Office action mailed September 13, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,358,752	Evans et al	10-1994
5,145,781	Suzuki et al.	9-1992
5,023,235	N'Guyen et al.	6-1991
5,114,716	N'Guyen et al.	5-1992

Harrisons' Principles of Internal Medicine, 1994, Chapter 55, Photosensitivity and Other Reactions to Light, pages 309-313.

**(9) Grounds of Rejection**

The following grounds of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 37-38, 43 and 48-50 are rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 5,358,752 to Evans et al, in view of 5,145,781 to Suzuki et al. (of record), and as evidenced by the entry in *Harrisons' Principles of Internal Medicine*, 1994, chapter 55, photosensitivity and other reactions to light, pages 309-313 (of record.)

Evans et al. teaches a skin care composition containing an antioxidant that reduces the accumulation of lipid peroxides and other biological oxidation products in the skin (see abstract, in particular.) Evans et al. teaches that skin issues such as wrinkling and melanoma and other cancers are thought to be accelerated by accumulation of peroxides in skin tissues, and that such peroxides are produced by environmental factors such as exposure to UVB radiation, which is considered to be a primary cause of sunburn and melanoma (see column 1, lines 20-30, in particular.) Evans et al. teaches that it is desirable to provide antioxidants in skin care products for the control of skin tissue itself, and particularly to control peroxide formation in skin exposed to sunlight having a harmful intensity of UVB radiation (see column 1, lines 48-57, in particular.) Evans et al. teaches that antioxidants can be applied to skin to prevent oxidative damage caused by UV radiation (see column 4, lines 22-28, in particular), and the antioxidants may also be applied to skin to control oxidation resulting from burns to the skin and underlying tissues, such as in sun burn formulations (see column 4, lines 29-35 and Example 5, in particular.) Thus, Evans et al. teaches the topical application to skin of a composition comprising an antioxidant to control the oxidative damage of skin damaged by UVB radiation.

Evans et al. does not specifically teach applying to the skin an antioxidant comprising one of the flavonoids, as recited in claim 37. Evans et al. also does not specifically teach applying an antioxidant to the skin of a patient that is in need of

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treatment or modulation of the immunosuppression of skin cells induced by UVB radiation, as recited in claim 37.

Suzuki et al. teaches that alpha-glycosyl rutin has properties as an antioxidant and is uv-absorbent, and can be provided in pharmaceuticals and cosmetics (i.e. for topical application) (see abstract, in particular.) Suzuki et al. teaches that the alpha-glycosyl rutin acts as an antioxidant to exhibit activities of removing activated oxygen and suppressing the formation of lipoperoxides (see column 8, lines 15-29, in particular.) Suzuki et al. teaches that the alpha-glycosyl rutin is mainly composed of alpha-glucosyl rutin (see column 2, lines 55-60, in particular), and thus teaches the flavonoid as recited in claim 37.

Accordingly, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to provide the alpha-glucosyl rutin of Suzuki et al. in the skin treatment method of Evans et al, because Evans et al. teaches that antioxidants can be applied to skin to control oxidative damage from UVB radiation, such as in sunburn, whereas Suzuki et al. teaches that alpha-glycosyl rutin has antioxidative effects and can be suitably provided in cosmetic compositions. Thus, one of ordinary skill in the art at the time the invention was made would have found it obvious to provide the alpha-glucosyl rutin in the treatment method of Evans et al, with the expectation of providing a suitable antioxidant effective for reducing controlling oxidative damage caused by exposure to UVB radiation.

Regarding the "effective amount" of the flavonoid, as recited in claim 37, Suzuki et al. teaches that the alpha-glycosyl rutin mainly composed of alpha-glucosyl rutin can be provided in an amount of 0.001 w/w% or more in cosmetics (see column 8, lines 45-57, in particular), which is an amount that overlaps with the ranges recited in the claims, and Evans et al. teaches that an effective amount of an antioxidant added to a product may vary from 1 to 100,000 ppm by weight based on the total weight of the product (see column 4, lines 1-15, in particular.) Furthermore, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to vary and/or optimize the amount of antioxidant provided in the composition, according to the guidance provided by Evans et al. and Suzuki et al, to provide a composition having desired properties, such as desired skin treatment. It is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.)

Evans et al. and Suzuki et al. do not specifically teach applying an antioxidant to the skin of a patient that is in need of treatment or modulation of the immunosuppression of skin cells induced by UVB radiation, as recited in claim 37.

However, as evidenced by the entry in *Harrison's*, excessive exposure to UVB radiation is implicated in the development of a number of skin disorders, including the

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immunosuppression of skin cells (see page 309, final full paragraph), which is believed to lead to a risk of cancer development in human skin (see page 310, first and second full paragraphs, in particular.) Accordingly, the entry in *Harrison's* teaches that excessive amounts of UVB radiation can lead to immunosuppression of skin cells, and thus it is considered that the population of individuals that has been exposed to excessive UVB radiation, such as those having sunburn, are a population that closely overlaps with and/or is the same as those patients in need of treatment or modulation of the immunosuppression of skin cells induced by the UVB radiation.

Accordingly, it is considered that the skin treatment method of Evans et al. and Suzuki et al, as evidenced by the entry in *Harrison's*, provides treatment or modulation of immunosuppression of skin cells induced by UVB radiation because the method of Evans et al. and Suzuki et al. teaches the treatment of skin, such as sunburned skin, which has been exposed to excessive UVB radiation, and which is thus likely to have immunosuppression of the skin cells.

Regarding the recitation that "immunosuppression of skin cells induced by UVB radiation is treated or modulated," as recited in claim 37, it is noted that as the combined teachings of the references renders the claimed composition and method of using the composition obvious, the property of such a claimed composition and method of use will also be rendered obvious by the prior art teachings, since the properties, namely the treatment or modulation of the immunosuppression, are inseparable from its



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composition. Therefore, if the prior art teaches the composition or renders the composition obvious, then the properties are also taught or rendered obvious by the prior art. In re Spada, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990.) See MPEP 2112.01. The burden is shifted to Applicant to show that the prior art product and method of using the product does not possess or render obvious the same properties as the instantly claimed method of using the product. Accordingly, claim 37 is obvious over the teachings of Evans et al. in view of Suzuki et al. in view of the entry in *Harrison's*.

Regarding claim 38, the references teach a method that treats immunosuppression, as discussed above. Regarding claim 43, Evans et al. teaches that a phenolic diterpene compound can be provided as an antioxidant in the composition (see abstract, in particular.)

Regarding claim 48, Suzuki et al. teaches that rutin can also be provided as an antioxidant in a cosmetic composition (see column 1, lines 45-55, in particular), and thus it is considered that it would be obvious to incorporate rutin as the antioxidant in the method of Evans et al. for the same reasons as described above for alpha-glycosyl rutin.

Regarding claim 49-50, Suzuki et al. teaches that the alpha-glycosyl rutin mainly composed of alpha-glucosyl rutin can be provided in an amount of 0.001 w/w% or more

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in cosmetics (see column 8, lines 45-57, in particular), which is an amount that overlaps with the ranges recited in the claims, and Evans et al. teaches that an effective amount of an antioxidant added to a product may vary from 1 to 100,000 ppm by weight based on the total weight of the product (see column 4, lines 1-15, in particular.) Furthermore, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to vary and/or optimize the amount of antioxidant provided in the composition, according to the guidance provided by Evans et al. and Suzuki et al, to provide a composition having desired properties, such as desired skin treatment. It is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.)

Claims 39-43, 44-47, 51-53 and 55-56 are rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 5,358,752 to Evans et al, in view of 5,145,781 to Suzuki et al, and as evidenced by the entry in *Harrisons' Principles of Internal Medicine*, 1994, chapter 55, photosensitivity and other reactions to light, pages 309-313, as applied to claims 37-38, 43 and 48-50 above, and further in view of U.S. Patent No. 5,023,235 to N'Guyen et al, issued June 11, 1991 (hereinafter N'guyen et al (1).)

Evans et al, Suzuki et al. and *Harrison's* are applied as discussed above, and teach the claimed method comprising applying to skin, which has been immunosuppressed by UVB radiation, a flavonoid such as those recited. Evans et al,

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Suzuki et al. and *Harrison's* teach that the application of antioxidants such as the flavonoid provides the skin treatment.

The references do not specifically teach applying a composition that further comprises a cinnamic acid derivative, as recited in claims 39-42, and thus does not teach claims 44-45 depending therefrom or the ratio of flavonoid and cinnamic acid derivatives as in claims 51-52. The references also do not specifically teach providing an antioxidant that is tocopherol or is derivatives, as recited in claims 46-47. The references also do not specifically teach providing the composition in the form of an emulsion, as recited in claim 53.

N'Guyen et al. (1) teaches that caffeic acid and its esters as well as tocopherols are known to have antioxidant activity (see column 1, lines 35-40, in particular), and that the caffeic acid can be suitably incorporated into cosmetic compositions (see column 1, lines 15-20, column 2, lines 53-57 and column 3, lines 24-27, in particular.) Thus, N'Guyen et al. (1) teaches providing an antioxidant that is caffeic acid, the hydroxycinnamic acid derivative as recited in claims 39-42, and also teaches providing another antioxidant, as in claims 44-45, such as tocopherol, as recited in claims 46-47.

Accordingly, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to provide the caffeic acid and/or tocopherol of Nguyen et al. (1) in the skin treatment method of Evans et al, Suzuki et al.

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and *Harrison's*, because Evans et al, Suzuki et al. and *Harrison's* teach that antioxidants can be applied to skin in the method to control oxidative damage from UVB radiation, such as in sunburn, whereas N'Guyen et al. (1) teaches that caffeic acid and tocopherols have antioxidative effects and can be suitably provided in cosmetic compositions. Thus, one of ordinary skill in the art at the time the invention was made would have found it obvious to provide the caffeic acid and/or tocopherols in the treatment method of Evans et al, Suzuki et al. and *Harrison's* with the expectation of providing a suitable antioxidant effective for reducing controlling oxidative damage caused by exposure to UVB radiation. Accordingly, claims 39-42 and 44-47 are obvious over the references.

Regarding claims 51-52, Evans et al. and Suzuki et al. teach suitable amounts for antioxidants such as the flavonoid and caffeic acid in the composition, and N'guyen et al. further teaches suitable amounts of the caffeic acid in a cosmetic composition (see column 3, lines 55-63, in particular.) Furthermore, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to vary and/or optimize the amount and/or ratios of antioxidants provided in the composition, according to the guidance provided by the references, to provide a composition having desired properties. It is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.)

Regarding claim 53, it is noted that Evans et al. teaches that the antioxidants can be applied to the skin in a carrier that is any cosmetically acceptable liquid or semi-solid materials (see column 3, lines 45-50, in particular.) Although Evans et al, Suzuki et al. and *Harrison's* do not specifically teach an emulsion as an example of a cosmetically acceptable carrier material, N'guyen et al. (1) teaches providing water-in-oil emulsions as carriers for cosmetics (see Example I, in particular), and thus teaches that emulsions are known as cosmetically acceptable carriers. Thus, it is considered that one of ordinary skill in the art at the time the invention was made would have been motivated to provide an emulsion, as taught by N'guyen et al. (1), as the carrier for the composition of Evans et al, Suzuki et al. and *Harrison's*, with the expectation of providing a cosmetically acceptable carrier for the composition.

Regarding claim 55, it is noted that Evans et al, Suzuki et al, and *Harrison's* teach the claim method of treating skin by applying a flavonoid as claimed, and also teach that the composition can comprising another antioxidant, such as rutin, as has been discussed for claims 37 and 43 above. Also, N'guyen et al. (1) teaches that caffeic acid has antioxidant properties and can be incorporated into a cosmetic composition, and thus it is considered obvious that it would have been obvious to incorporate the caffeic acid of N'guyen et al. (1) into the method of Evans et al, Suzuki et al, and *Harrison's*, for the reasons as set forth for claims 39-42 above.

Furthermore, Regarding the recitation that “immunosuppression of skin cells induced by UVB radiation is treated,” as recited in claim 55, it is noted that as the combined teachings of the references renders the claimed composition and method of using the composition obvious, the property of such a claimed composition and method of use will also be rendered obvious by the prior art teachings, since the properties, namely the treatment or modulation of the immunosuppression, are inseparable from its composition. Therefore, if the prior art teaches the composition or renders the composition obvious, then the properties are also taught or rendered obvious by the prior art. In re Spada, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990.) See MPEP 2112.01. The burden is shifted to Applicant to show that the prior art product and method of using the product does not possess or render obvious the same properties as the instantly claimed method of using the product. Accordingly, claim 55 is obvious over the teachings of Evans et al. in view of Suzuki et al. as evidenced by the entry in *Harrison's*, and further in view of N'Guyen et al. (1)

Regarding claim 56, N'guyen et al. (1) teaches providing caffeic acid, a hydroxycinnamic acid derivative, and tocopherol, as discussed above, and thus the claim is obvious over the references.

Claim 54 is rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 5,358,752 to Evans et al, in view of 5,145,781 to Suzuki et al, and as evidenced by the entry in *Harrisons' Principles of Internal Medicine*, 1994, chapter 55,

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photosensitivity and other reactions to light, pages 309-313, as applied to claims 37-38, 43 and 48-50 above, and further in view of U.S. Patent No. 5,114,716 to N'guyen et al, issued May 19, 1992 (hereinafter N'guyen et al. (2))

Evans et al, Suzuki et al. and *Harrison's* are applied as discussed above, and teach the claimed method comprising applying to skin, which has been immunosuppressed by UVB radiation, a flavonoid such as those recited. Evans et al, Suzuki et al. and *Harrison's* teach that the application of antioxidants such as the flavonoid provides the skin treatment. Evans et al. further teaches that the antioxidants can be applied to the skin in a carrier that is any cosmetically acceptable liquid or semi-solid materials (see column 3, lines 45-50, in particular.)

Evans et al, Suzuki et al. and *Harrison's* do not specifically teach a gel as an example of a cosmetically acceptable carrier material, as recited in claim 54.

N'guyen et al. (2) teaches that gels are known as cosmetically acceptable carriers for cosmetics (see Example III, in particular.)

Thus, it is considered that one of ordinary skill in the art at the time the invention was made would find it obvious to provide a gel, as taught by N'guyen et al. (2), as the carrier for the method as taught by Evans et al, Suzuki et al. and *Harrison's*, because Evans et al, Suzuki et al. and *Harrison's* teach that any cosmetically

acceptable carrier can be provided, and N'guyen et al. (2) teaches that gels are known as cosmetically acceptable carriers. Thus, one of ordinary skill in the art would have been motivated to provide a gel as the carrier for the composition of Evans et al, Suzuki et al. and *Harrison's*, with the expectation of providing a suitable cosmetically acceptable carrier for the composition.

#### **(10) Response to Argument**

Appellants' arguments have been fully considered but have not been found persuasive.

Appellants argue that there is no motivation to combine the references because Appellants assert that (1) Evans et al. fails to provide motivation to incorporate an antioxidant different from those disclosed therein into the composition (see page 9 of Appeal Brief, in particular), (2) Suzuki et al. does not teach or suggest an antioxidant which would be suitable for the purposes of Evans et al (see page 13 of Appeal Brief, in particular), and (3) a composition according to Evans et al. as modified by Suzuki et al. would not necessarily be capable of treating or modulating immunosuppression (see page 14 of Appeal Brief, in particular.) The Examiner respectfully disagrees.

With regards to point (1), Appellants specifically note that Evans et al. teaches that the particular antioxidants disclosed therein are extremely effective at protecting



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skin from peroxidation when applied topically, and thus Appellants assert that one of ordinary skill in the art would not have been motivated to seek out additional antioxidants, as the concentration of those taught by Evans et al. could simply be increased to improve protection (see page 11 of Appeal Brief, in particular.) Regarding point (2), Appellants note that Evans et al. is concerned with providing antioxidants that impart protective action by inhibiting formation of lipoperoxides in human skin due to UVB exposure, and further note that Suzuki et al. does not teach that the alpha-glycosylrutin has antioxidative activity that would limit the formation of such lipoperoxides.

However, the Examiner notes that the motivation for combining the references rests in the fact that both Evans et al. and Suzuki et al. teach the desirability of providing compositions capable of protecting skin from UV ray exposure, and the effects thereof. Evans et al. teaches compositions intended to protect against UV radiation and the harmful effects of exposure to such radiation, and teaches that antioxidants are particularly effective at inhibiting the formation of harmful peroxides produced by exposure to UVB radiation (see column 1, lines 48-57.) Evans et al. teaches that such compositions can be useful in composition to prevent oxidative damage (i.e. sun-screening formulations) (see column 4, lines 22-28, in particular), as well as to treat skin having sun burn (i.e. sun-burn formulations) (see column 4, lines 29-35 and Example 5, in particular.) Suzuki et al. teaches that alpha-glycosylrutin is suitable for application to skin, and is active as an antioxidant as well as a UV absorber (see abstract, in

particular.) Thus, Suzuki et al. teaches the desirability of incorporating the alpha-glycosylrutin into topical compositions where antioxidant and UV absorption activity is particularly desired, such as the skin care compositions of Evans et al.

Accordingly, one of ordinary skill in the art would have been motivated to provide the alpha-glycosylrutin of Suzuki et al. into the composition of Evans et al. with the expectation of forming a composition capable of providing protection of skin against UV rays. Note it is considered that "[I]t is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980.)

Regarding Appellants' point (1), it is considered that Evans et al's teaching that the antioxidants described therein are "extremely effective in protecting the skin" would not be sufficient to deter one of ordinary skill in the art from combining other ingredients known in the art to be effective in UV-ray absorption and antioxidation. As expressed by *in re Kerkhoven* above, it is obvious to combine two compositions known in the art to be useful for the same purpose, with the expectation that the combined composition will also be useful for that purpose.

Regarding Appellants' point (2), it is noted that Evans et al. teaches the desirability of providing antioxidants in general to protect against UV ray exposure, and Suzuki et al. teaches that the alpha-glycosylrutin has antioxidative activity and is also a UV absorber, as has been discussed above. Accordingly, regardless of whether the alpha-glycosylrutin operates by the same method as the compounds taught by Evans et al, it is nevertheless considered that one of ordinary skill in the art would have been motivated to provide the alpha-glycosylrutin in the composition of Evans et al, with the expectation of protecting skin from UV ray exposure. The desirability of providing the alpha-glycosylrutin in skin-protective compositions is further demonstrated by Suzuki et al's teachings of formulating the ingredient into sun-screening compositions (see Example B-9 and B-14, in particular.)

Regarding Appellants' point (3), it is noted that the combination of Evans et al. and Suzuki et al. renders obvious a method of applying to skin, such as skin in need of protection from UV rays or sun burned skin, a composition having the alpha-glycosylrutin as claimed. Thus, as the combined teachings render application of the claimed composition obvious, the property of such a claimed composition will also be rendered obvious by the prior art teachings, since the properties, namely the ability to treat or modulate immunosuppression, are inseparable from its composition. Therefore, if the prior art teaches the composition or renders the composition obvious, then the properties are also taught or rendered obvious by the prior art. In re Spada, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990.) See MPEP 2112.01. The burden is

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shifted to Applicant to show that the prior art product does not possess or render obvious the same properties as the instantly claimed product. Accordingly, as the prior art renders obvious the application of the composition as claimed, it is considered that such composition would necessarily be effective for treating or modulating immunosuppression of skin cells induced by UVB radiation.

Furthermore, it is noted that Suzuki et al. teaches that the alpha-glycosylrutin can be provided in cosmetics in an amount of 0.001 w/w% or more in cosmetics (see column 8, lines 45-57, in particular), which is an amount that overlaps with the ranges recited in the claims, and Evans et al. teaches that an effective amount of an antioxidant added to a product may vary from 1 to 100,000 ppm by weight based on the total weight of the product (see column 4, lines 1-15, in particular.) Furthermore, it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to vary and/or optimize the amount of antioxidant and UV absorber provided in the composition, according to the guidance provided by Evans et al. and Suzuki et al, to provide a composition having desired properties, such as desired skin treatment. It is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.)

With regards to dependent claim 38, Appellants argue that Evans et al. teaches using the composition prophylactically, that is to skin not already harmed by UVB rays,

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and thus there would be no need to treat the skin, as recited in the claim. The Examiner respectfully disagrees. Claim 38 reads "the method of claim 37, wherein immunosuppression is treated," and thus reads on any method in which the steps of claim 37 are performed, and which results in the treatment of immunosuppression. As evidenced by Harrison, excessive exposure to UVB rays leads to the immunosuppression of skin cells, and thus individuals exposed to UVB rays are also those at risk for immunosuppression of skin cells. Evans et al. teaches a composition having antioxidants that can be used for the prevention of damage to skin by UV exposure (sun-screening compositions), as well as to heal skin damaged by UV exposure (sun burn treating compositions), as has been discussed above. Suzuki et al. teaches providing the ingredient, namely alpha-glycosylrutin, that is effective at treating immunosuppression according to Appellants own disclosure. Accordingly, a combined composition according to Evans et al. and Suzuki et al. would be capable of treating any immunosuppression that might occur in an individual wearing the sun-screen composition, such as an individual wearing the sunscreen that has been exposed to UVB rays for an extended duration, and would also be capable of treating immunosuppression occurring in an individual that has the composition applied for the purposes of treating sunburn. Thus, the combined teaching of Evans et al. and Suzuki et al, as evidenced by Harrison, renders obvious a method in which *the result* is the treatment of any immunosuppression that has occurred, as recited in the claim.

Regarding dependent claims 39-42, 55 and 56, Appellants argue that the references do not provide sufficient motivation to combine other ingredients, such as cinnamic acid derivatives, antioxidants, and tocopherol, into the composition of Evans et al. and Suzuki et al (see page 16, 19 and 21 of Appeal Brief in particular.) However, as discussed above, one of ordinary skill in the art would have found it obvious to provide the caffeic acid and/or tocopherol of Nguyen et al. (1) in the skin treatment method of Evans et al, Suzuki et al. and *Harrison's*, because Evans et al, Suzuki et al. and *Harrison's* teach that antioxidants can be applied to skin in the method to control oxidative damage from UVB radiation, such as in sunburn, whereas N'Guyen et al. (1) teaches that caffeic acid and tocopherols have antioxidative effects and can be suitably provided in cosmetic compositions. Thus, one of ordinary skill in the art at the time the invention was made would have found it obvious to provide the caffeic acid and/or tocopherols in the treatment method of Evans et al, Suzuki et al. and *Harrison's* with the expectation of providing a suitable antioxidant effective for reducing controlling oxidative damage caused by exposure to UVB radiation.

Appellants further argue that dependent claims 51 and 52 are not obvious over the cited references because the references do not teach the specific weight ratios recited therein. The Examiner notes that, as discussed above, Evans et al. and Suzuki et al. teach suitable amounts for antioxidants such as the flavonoid and caffeic acid in the composition, and N'guyen et al. further teaches suitable amounts of the caffeic acid in a cosmetic composition (see column 3, lines 55-63, in particular.) Accordingly, it is

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considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to vary and/or optimize the amount and/or ratios of antioxidants provided in the composition, according to the guidance provided by the references, to provide a composition having desired properties. It is noted that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.)

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Abigail M. Cotton

*Abigail M. Cotton* 6/14/2007  
Examiner AU 1617

*Sreeni Padmanabhan*  
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